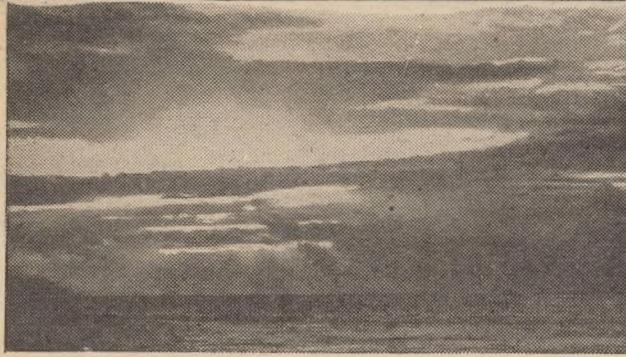


Good Morning

\$40

The Daily Paper of the Submarine Branch

Beneath The Surface



With AL MALE

LET'S have a pow-wow over the Creator, but do not mistake me.

The other evening I was in a small company that was queer. Still, the beer was good. As for the company, all I need say is that there was a young American soldier who insisted on singing the first verse of the Battle Hymn.

And there was a conscientious objector who objected to the word "hymn" being applied to war.

Now, it so happens that I have had experience of all the elements that composed that company—Americans, C.O.s and beer. During the previous war I had the task of taking a group of C.O.s into custody, and I admit that they argued so logically (as it seemed then) that I felt half-sorry for them.

Half-sorry. Fortunately for me (and maybe for them) it was only half.

As for the American who sang the Battle Hymn, he knew only the first verse; and the C.O. silenced him by declaring that a "hymn" was an act of adoration, and to adore violence was ethically wrong. But is it?

I had a go at that C.O. And up before my mind arose the figure of an elderly woman who lived in Boston . . . Mrs. Julia Ward Howe, widow of Dr. Sam G. Howe, a friend of Longfellow.

It was she who wrote the Battle Hymn. She had been on a visit to Washington and had passed a column of soldiers on the road who were singing "John Brown's Body lies a-mouldering in the grave."

That night she didn't sleep much. In the gray dawn she could stand it no longer, and she got up and, almost unconsciously, wrote the Battle Hymn on a little table in her bedroom. Then she lay down and slept.

The Hymn is sung to the music of "John Brown," and the first verse, which the American was bawling the other evening, is this:

Mine eyes have seen the glory of the coming of the Lord;

He is trampling out the vintage where the grapes of wrath are stored;

He hath loosed the fateful lightning of His terrible swift sword.

His truth is marching on!

Where the conscience objector went wrong was in thinking that there is no strength in it.

It is not good ethics to say "I cannot fight evil, because I should be doing evil in fighting it."

If you don't fight it, it will smother you . . . like the rotten tooth.

So, once more, Good Hunt-

PARSON'S DULL SERMON CAUSED TYPEWRITER INVENTION

IN this changing world the typewriter, over the past few years, has been one of the few things to keep the character we all know so much. Now, thanks to the genius of an American naval officer, even the typewriter, as science develops, may be changed.

Lieutenant-Commander A. Dvorack, of the United States Navy, has invented a typewriter, now being used in the U.S. Navy Department offices at Washington, capable of a speed of 180 words a minute. He has so arranged the keys that they are more convenient to the hands.

Typists who have used Commander Dvorack's machine reckon it to be a great improvement on the old-style keyboard. Perhaps, when the war has been won, and mass-production of these machines begins anew, this new keyboard will be one of the main features of the new super-typewriters.

Like so many ordinary-day things, people take the typewriter for granted. Few ever think how this wonderful machine came into being; the years of hard work and experiment that were spent in perfecting the earliest models.

It was as long ago as 1714 that an engineer named Henry Miller took out a patent for a machine which he described at the time as "able to impress letters on paper as in writing." Of this machine there is no trace to-day.

Thus it so happened, when Sholes mentioned that the parson's sermon was dull, that the two men decided to discover why this should be so. In the past, you see, the preacher had been so good that folk from miles around had travelled to hear him talk.

Finally, after careful investigation, they formed the opinion that the parson was a tired man. That his many duties brought about such a state of exhaustion that he

The next man to produce a machine similar to the typewriter of to-day was a certain William Burt. His contraption was called a typographer. There is no doubt that this was an extremely useful machine. Unfortunately it was lost in a Washington fire in 1836.

Little was heard of "typewriter claims" for several years following this disaster to William Burt's machine. Then, in 1867, C. Latham Sholes, editor of a small newspaper in Milwaukee, Wisconsin, began to chat one afternoon with his friend and the local attorney, Carlos Glidden. The subject he chose was the local parson's dull sermons.

In a small town such as Milwaukee, the locals, apart from their work, found precious little entertainment, so they used to while away the spare hours talking among themselves. It so happened that Sholes and Glidden were of the intelligent type. Always did their talks result in something constructive being the result of their hours of discussion.

Thus it so happened, when Sholes mentioned that the parson's sermon was dull, that the two men decided to discover why this should be so. In the past, you see, the preacher had been so good that folk from miles around had travelled to hear him talk.

Finally, after careful investigation, they formed the opinion that the parson was a tired man. That his many duties brought about such a state of exhaustion that he

did not put all his skill into the writing of his sermons.

"If a machine were invented that would do away with the writing side of his work he'd be a lot better," said Sholes. "Now," he added, half to himself, "I wonder if I could make such a machine in my workshop?"

Glidden encouraged his friend, and for hours every night, when the business of his newspaper office had ended for the day, Chris Sholes used to work in the shop at the rear of the premises on his secret machine.

Disappointments were many, but at long last, surrounded by his office staff and numerous friends, he said he intended to test the worth of his machine. Placing a sheet of paper in the rear of the "typewriter," he hit some keys, then withdrew the sheet. On it was printed "C. Latham Sholes, September, 1867."

Carlos Glidden, a better business man than Sholes, realised that this invention was worth a great deal of money, and persuaded the newspaperman to write to a number of influential people using the typewriter, and give them details of his discovery, at the same time asking their financial support.

Chris Sholes was shy at first—but gave way to Glidden's enthusiasm. The result was that James Densmore, the Philadelphia oil magnate, sent along a donation of six hundred dollars and a request that Sholes should keep at his task.

In an effort to make the public aware of the usefulness of a typewriter people were given the opportunity, at a big fair, to type a letter home in return for 25 cents. Thousands accepted the then novelty—but appeared to forget the typewriter when they returned home.

It was only when a certain organisation in New York began to encourage women to learn the art of typing that business houses realised the possibilities of the machine.

At the time, however, there was a great deal of trouble, many people thinking it "unchristianlike" for a young woman to type. But time defeated this idea, and typists became part and parcel of business life.

Some of these machines, it might be added, weighed over forty pounds—so when a young man offered to move a girl's typewriter he was certainly a "gallant."

At the turn of the present century typewriters assumed the style we know to-day, and other developments quickly followed. To-day machines have keyboards designed for Greek, Russian, Siamese, Persian and Arabic dialects. In addition, Britain's typewriting industry is among the best in the world.

Yet this "wonder machine" now part of our lives, had a very humble beginning, as you can now see.

Jane takes a whisky and soda.

Drop in
Here
says
RON RICHARDS—
FOR "TUNA VILLA" IS
YOUR
HOME

IVY GROVE, Cromwell Road, Dunoon, is known as "Tuna Villa." Not only because it is the home of Mr. and Mrs. Trapp, the parents-in-law of Leading Seaman Peter Heather, but because the crew of His Majesty's Submarine "Tuna" regard it as home.

Time was that every evening a dozen or more of Peter's shipmates strolled in for a sing-song, a drink, a meal, or a night's sleep. Some of them used to walk in after midnight—Mrs. Trapp never closed her front door—it has been known for sub-mariners to take W.R.N.S. back; always they were fed and given a bed.

Mrs. Trapp never interferes with "her boys," but if she makes a suggestion it is law. If Peter Heather's wife says baby Gordon can't get to sleep, the boys close the piano lid and sit around talking. Some prefer to do that anyway; Mr. Trapp is a great humorist, and he has

Sing-song, with Mrs. Heather playing, and "Jane," the monkey, conducting.



travelled. He tells new tales every night.

It is not quite the same at Ivy Grove now; the "Tuna" boys haven't been there for some time because it is too far to travel in one evening. That is the only difference, though; the house is still full; another crew has been adopted, and when they leave there will be more successors.

I called at Ivy Grove one evening and was greeted by a Chaplain, the Rev. W. Bulstrode. "Bish" has a habit of calling, partly because it was through him that boys were permitted to stay out after 11 p.m. if they were at Mrs. Trapp's house, and partly because he appreciates home comforts, too.

Mrs. Trapp said, "Glad to see you; we have a haggis tonight; you're just in time."

I sat next to Francis Thompson, he was a leading seaman and a native of Barry. He and his shipmates were a trifle shy of a civilian for a while, but we had some victuals and two helpings of haggis, and they got around to telling me about home.

Later we sang together, and eventually I heard some new jokes.

Mrs. Heather's girl friend, on leave from the A.T.S., called in and we had a party. "Bish" and A.B. Leslie ("Drip") Robinson washed up and John Taylor fed Jane, the monkey.

That's the way it is at Ivy Grove; anyone just walks in and becomes one of the family. No questions, no formalities; it's just like home, and one finds it easy to walk in and say "Hello, mother, what's for supper?" In fact, some do say that, because Tuna Villa is home.



ARE YOU CRACKERS? BECOME AN INVENTOR

SUNDAY FARE

"If there is anything in this invention, it is probably perpetual motion, or something very like it," said prosecuting counsel in a recent case, describing an invention which, it was claimed, would go "without the somewhat irksome formality of having to put petrol in it."

Perpetual motion has held a strong fascination for inventors since the dawn of mechanical science.

The impossibility of true perpetual motion has been scientifically stated many times.

YOUR GREENS ARE TAILOR-MADE TO-DAY

ABOUT one-quarter of the fruit and vegetables we eat were unknown twenty years ago and probably nine-tenths of them were unknown a hundred years ago.

This may seem a tall statement, but only because even the enthusiastic amateur gardener often does not realise what he owes the plant-breeders who creates new strains to meet new needs.

The plant-breeders "tailor-makes" fruit and vegetables to order. Generally he has to combine a number of qualities found in different strains into a single vegetable or fruit. Appearance, flavour, shape, season of maturity and resistance to disease are some of the factors he tries to control.

The result of his efforts can be seen in such things as various apples which ripen at intervals to cover a season of almost nine months, blackberries with all the old flavour that are easy to pick because the stems carry no thorns, and potatoes that give heavy yields because they are resistant to diseases.

Our modern plants are as much "inventions" as our modern machinery, and, in fact, in the U.S.A. plant-breeders are now permitted to patent their novelties.

Few of the great breeders have reaped great rewards, because it has not been possible to "protect" their products. Few of them have sought reward, except in the fascination of producing a new plant.

All the Cox's apples growing all over the world come from a tree grown from an apple pip by a Mr. Cox, near London, more than a century ago. The famous "Arran" potatoes are all descended from potatoes grown on the Isle of Arran by Mr. Donald MacKievie, who was recently awarded the O.B.E. for his work.

Mr. MacKievie produced his first "Arran" potatoes (Arran Chief) in 1907, after six years of careful selection. New strains of potato cannot be grown by planting tubers. The seeds must be planted and selection made from the thousands produced by a single plant.

Out of these thousands, one or two will have the desired characteristics. They must be grown and a further selection made. Thus it takes years to produce a new variety, and at the end you will have only a few pounds of tubers.

ARRAN'S ADAM.

But these, if they combine heavy yield with immunity from disease, and the desired flavour, shape and texture, will be worth their weight in gold. From them, thousands of tons of seed tubers can be grown in a few years.

Arran Victory started as a single tuber the size of a penny. A few years later 50,000 acres were planted with Arran Victory tubers. All the Arran heavy crops even after very severe winters. Plant-breeders 25-acre farm. Yet in Scotland will make failure of fruit crops alone some 15,000 acres are rarer and rarer.

But it takes more than this to deter inventors. For years the U.S. Patent Office has been dealing with about 300 inventors of perpetual motion every twelve months.

The claims to have discovered the secret were so numerous that the office kept a special circular letter explaining that devices claiming to produce perpetual

planted only for producing seed.

To-day, at Cambridge, there are a few trays of tiny potatoes which have not yet even been christened. They are the result of thirty years' searching for a native potato resistant to all blights and five years' breeding from the selected parent.

In five or six years it will be possible to tell whether these potatoes are really as resistant as hoped and retain their flavour. If it "comes off," they will become the parents of millions of tons of potatoes.

More spectacular, perhaps, is the work of men who cross different strains and species to produce completely "new" fruit and vegetables.

TAILOR'S PATCHES.

Most famous is the cross between blackberry and raspberry we call the loganberry. But new "tailor-made" fruit include a seedless grape that ripens two months earlier, the boysenberry, giving the heaviest yield of any "soft" fruit, the "citrange" and the "tangelo," hybrids between grapefruit and orange and grapefruit and tangerine; a cucumber that looks like a lemon and grows on a vine; a strawberry that grows on a bush like a currant; an odourless onion, and a cabbage that does not smell when boiled.

A fruit described in a British Columbia fruit patch recently has the appearance of a plum, the taste of a strawberry, seeds like a fig, and grows on a vine like grapes!

Breeding to produce new strains that will stand unusual climates—hot or cold—is another aspect of the plant inventor's work. The tomatoes and maize we have had in Britain this year are the result of this experimentation.

"Outdoor" tomatoes were virtually unknown not so many years ago. We may yet get a perfectly hardy tomato. Incidentally, the maize, or "corn," as they call it in the U.S., is another interesting example of "tailor-made" plants.

Special small, thin cobs are the result of deliberate breeding to produce a head that would fit easily into tins for canning!

The Russian breeder, Michorin, has given his country cherries, raspberries and apricots that can be grown in the chill climate of Siberia. He combined the flavour and shape of plants from milder climates with hardy native plants of Siberia.

At the moment, workers in several countries are breeding apple and plum trees from specially selected stocks that have shown their ability to give

So says J. S. Douglas

motion would not be considered for patents.

Refusal to accept perpetual motion devices for patents is common among Patent Offices, and is based, not upon scepticism, but the desire to save inventors from wasting their fees.

Perpetual motion implies a machine that will work for ever without fuel or external force. It implies the use of completely frictionless working parts.

Any man who invented a method of eliminating friction would not have to trouble about a perpetual motion machine. A fortune would gladly be paid to him by motor-car manufacturers.

NATURAL AIDS.

The nearest approach to perpetual motion is obtained with devices using natural forces, such as rain, gravity and the tides.

These are not strictly perpetual motion, although, as in self-winding clocks, the idea may be ingenious and useful.

Using the discharge of particles from radium, a clock has been invented that will go for 2,000 years, and at the end the loss of energy by the radium will hardly be measurable.

But the fact remains that the energy will eventually disappear, and it is not perpetual motion.

We come close to perpetual motion with electric devices at very low temperatures. The conductivity of such substances as liquid helium is so near perfection that an electric current in a circuit would go on for a very long time. But, again, not for ever.

Perpetual motion, like infinity, can be represented only by a mathematical symbol.

The manufacture of gold from lead or other common metal is another snare that traps the inventor—or more often the innocent investor! This is not theoretically "impossible." But it is impossible to do it and make a profit. The method has been simply described by scientists.

You take an atom of lead and get rid of one alpha-particle. This gives you mercury. Next you expel a beta-particle. You get thallium. From this you expel an alpha-particle—and there is your gold!

The cost of treatment has been calculated at about £10,000 per ounce of lead, and

PUZZLE CORNER

Here are some outdoor games. They read across, so see how many you can find.

**NITSEN
TCUEQRO
LOBFLAOT
NOMDIBATN
LABABLES
KICRTEC
KHOYCE**

Solution in S 41.

even to-day gold can be obtained from many other sources at a few pounds an ounce.

DEATH-RAY DEVICES.

The misguided inventors who spent their energy on perpetual motion before the war are probably now experimenting with "death rays." There is nothing inherently impossible in a "death ray," a ray that will disintegrate matter at a distance of miles.

But before such a ray could be produced the inventor would have to master other problems, such as the efficient transmission of energy by wireless.

The solution of these would make him so wealthy that he would probably not trouble to put in the vast further work required to transmit energy that would be received without any special apparatus.

"Squaring the circle" is an impossibility which, perhaps, lures fewer people than it used to do. But some years ago a Bulgarian shoe manufacturer left £72,000 to be awarded to the first person performing the feat.

The courts were asked to say that, since the feat was impossible, the will was void, but they took a cautious position and decided that nothing should be done for fifty years, during which time claimants could attempt to prove they had squared the circle.

Attempts have been made for over two thousand years. "Squaring the circle" means finding the exact relationship between the diameter of a circle and its circumference, so that a means is found of constructing a square of equal size from a circle.

The problem intrigued the ancients. Archimedes gave us the approximate relationship, which we represent by the Greek letter "pi."

We use the fraction 22 over 7, or 3.1416 if we are working in decimals. These, however, are not complete.

In desperation, one Dutch mathematician went on working out "pi" to 900 places of decimals. It still did not "come out," and it can be mathematically demonstrated that it never will!

There are some curious incidents in the history of attempts to square the circle. For instance, a Frenchman offered 1,000 livres to anyone who could prove he had not accomplished the feat. A mathematician had no difficulty in doing this.

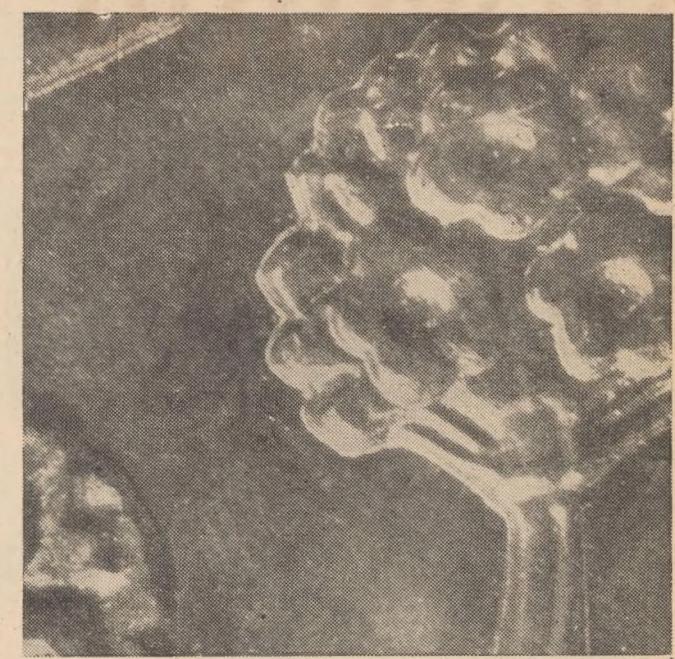
The Frenchman refused to pay, and was sued in the courts. He gained the verdict, not because he had squared the circle, but because the judge held it was not in the interests of society that a fool should suffer for his folly if it did no harm to anyone else.

Only the logical mind of man demands any relationship between the circumference of a circle and its diameter that can be represented by figures.

The symbol "pi" serves for calculations, and the approximation used by engineers would result in an error of only one yard in the circumference of the earth worked out from its diameter.

Solution to Puzzle in S 39.

T	O	O	M	A
N	Y	C	O	O
K	S	S	P	O
I	L	T	H	E
B	R	O	T	H



WHAT IS IT?

Here's this week's Picture Puzzle. Last week's was a wall of threepenny bits.

MOUNTAIN, WOOD AND COUNTRYSIDE

By Fred Kitchen

THE KESTREL AND THE DORMICE

JESSE was "plashing" the hedge which divides the demmed," said Jesse, talking to his unheeding friends, "yer rather prides himself on plash-ing (or laying) hedges, and, splitting the thorns low down at the root, plait them aslant the hedge-stakes, so that they make a perfect barrier to any sheep who thinks to push its head through to see what's going on in the next field.

But there's one thing Jesse can't abide—elder bushes. Up they have to come, root and branch. "For," says Jesse, "they smother the thorns and kill 'em, besides being no manner o' use as a fence against cattle."

He puts a rail fence in their place, and, if he finds any sapling thorns, plants them in the place of elder wood.

So when he came across the decayed stump of an "ellin"—a name for elder—he got to work with spade and axe.

The root was hollow and crumpling to decay, and down in the bottom he found a handful of dried grass, crumbled wood and dead thorn leaves.

Alongside the handful of rubbish were a few grains of wheat, one or two acorns, and a few wilted hawthorn hips.

The hedge is now finished, and a neat and workmanlike job it looks, except... an old stump of an elder tree has been left in. And it looks as though Jesse, for once, has forgotten himself.

Inside were two little dormice, curled up in their winter's sleep. They looked queer little objects, all head and tail, and were so snugly curled up no one but Jesse would ever have noticed anything beyond a handful of dry rubbish.

As he looked, one of the little creatures uncurled, its black beady eyes peeped out, and it ran slowly up Jesse's wrist.

"Nay, thou can't winter up there," said Jesse, and turned it back.

It gave a tiny whistle, which was immediately answered by its companion still in the nest, and together they peeped out on to the strange world of a man's hand.

SUNDAY THOUGHTS

He loves his bonds, who when the first are broke, submits his neck unto a second yoke.

Robert Herrick (1591-1674).

E'en crosses from His sovereign hand Are blessings in disguise.

James Hervey (1714-1758).

He did not see any reason why the Devil should have all the good tunes.

Rowland Hill (1744-1833).

BUCK RYAN



MILLIER'S SPORTS FLASHBACK

THE antiquity of archery as a sport, as well as means of offence and defence, is unquestioned. Centuries before our forbears ceased to use the club as a means of clinching an argument, the bow and arrow formed part of the equipment of the Greek nobility, who were instructed by the Scythians in the use of the bow.

The Scythians were an ancient nomadic race belonging to the northern parts of Asia.

The skill of the later English archers was attributed largely to the fact that they were taught to draw their bowstring to the right ear. The Assyrians, according to their sculptures as seen in the British Museum, invariably drew the bowstring to their ear or cheek. That this was an improvement on the method of ancient Greece is apparent. Homer (850 B.C.), in his *Odyssey*, mentions Eurytus, King of Oechalia, famous for his skill in archery; and in the *Iliad* we find:

"Close to his breast he strains the nerve below,
Till the barb's point approach the circling bow."

STERN AMAZONS.

The Amazonian women are said to have parted with their right breasts lest they should prove an impediment to their using the bow.

The cross-bow, which was first used in England by the Normans at the Battle of Hastings, was invented by the Sicilians.

By Henry VII and his son, the much-married Henry VIII, the use of the cross-bow was entirely forbidden. A penalty of £10 was to be inflicted on every man in whose house one might be found.

It was in the reign of Henry the First (1100-35) that the populace was first encouraged to become proficient in the use of the long-bow. The would-be marksmen were even protected by statute, for it was provided that if anyone practising with arrows or darts should by accident slay another it was not to be visited as a crime.

EVERY MAN A BOW.

It was under Edward IV (1461-83) that an ordinance was made calling upon every Englishman and Irishman, dwelling in England, to have a bow of his own height, to be made of yew, wych, hazel, ash, or any other seasonable tree, according to their power.

Henry VIII compelled every father to provide a long-bow and two arrows for each son at seven years old. Parents of the early scholars attending Harrow School had to provide their sons with bow and arrow.

John Lyon, who founded Harrow School in 1590, provided for "sport" in the rules drawn up for its direction. The sports were "driving a top, tossing a handball, running, and shooting."

All parents were required to furnish their children with bow-string, shafts and trestles, to exercise shooting.

Before leaving the subject of archery, it may be of interest to note that the Indians of the Amazon valley forestalled the inventor of rifling. They imparted a rotary motion to their arrows in flight by fixing the feathers at a slight angle instead of in a direct line with the shaft. The feathers were usually taken from the wings of the macaw.

FURTHER to my notes on the probable age of horse-racing in this country, it can be stated that the oldest race, which is still carried on, is the Newmarket Town Plate.

According to documents in the possession of the Jockey Club, the race was founded by King Charles II in 1665, to be run on the second Thursday in October in perpetuity. The distance is four miles, and each horse must carry 12 stone. Women riders are permitted.

The prize consists of the £3 entrance fee, to which is added £9 obtained from rents on land at Newmarket. The winner has to pay £1 to the Clerk of the Course and another £1 to be distributed amongst the poor of Newmarket.

One solitary Treasury note at to-day's value of the pound would not go very far, even at Newmarket. I doubt if there are any poverty-stricken residents of Newmarket. The poor are to be found at Newmarket after a day's racing—the mugs who omitted to take a return ticket and have to walk home—and they are many.

A WOMEN'S EVENT.

Since it was laid down that the race is to be run in perpetuity, the Jockey Club solemnly carries it out, but the race is merely a curiosity nowadays, and a mere handful of spectators attend to witness it, usually the friends and relatives of the women riders.

Only once in a while an elderly male joins issue with the women riders. It is not included in the programme of a race meeting, but occupies a place all its own on its appointed day.

As the horses have to carry 12 stone, you may guess that the mounts are not front-rank flat-racers. The riders are usually the daughters of owners or trainers, who enter for the fun of the thing rather than for the "valuable" prize-money.

W. H. MILLIER

Answer to Maze on Page 3 in S 39.
Hemp is Blue, Manilla is Red, Sisal is White.

Good Morning

All communications to be addressed to: "Good Morning,"
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The Things They Wear

